Name:

p1106: Solve by factoring (v7)

1. Solve the equation

$$x^2 + 13x + 42 = 0$$

$$(x + 7)(x + 6) = 0$$
$$x = -6$$
$$x = -7$$

2. Solve the equation

$$x^2 + 3x - 18 = 0$$

$$(x + 6)(x - 3) = 0$$
$$x = 3$$
$$x = -6$$

3. Solve the equation

$$3x^2 + 6x - 32 \;=\; 2x^2 + 4x - 8$$

$$x^2 + 2x - 24 = 0$$
$$(x + 6)(x - 4) = 0$$
$$x = 4$$
$$x = -6$$

4. Solve the equation

$$2x^2 + 13x - 17 \;=\; x^2 + 5x - 8$$

$$x^2 + 8x - 9 = 0$$
$$(x - 1)(x + 9) = 0$$
$$x = -9$$
$$x = 1$$

5. Solve the equation

$$7x^2 - 2x - 18 \;=\; 6x^2 - 8x - 2$$

$$x^2 + 6x - 16 = 0$$
$$(x - 2)(x + 8) = 0$$
$$x = -8$$
$$x = 2$$

6. Solve the equation

$$7x^2 + 41x + 30 = 0$$

$$(7x + 6)(x + 5) = 0$$
$$x = -5$$
$$x = \frac{-6}{7}$$

7. Solve the equation

$$11x^2 - 58x - 48 = 0$$

$$(11x + 8)(x - 6) = 0$$
$$x = 6$$
$$x = \frac{-8}{11}$$

8. Solve the equation

$$4x^2 - 9x - 2 \;=\; x^2 + x - 9$$

$$3x^2 - 10x + 7 = 0$$
$$(3x - 7)(x - 1) = 0$$
$$x = 1$$
$$x = \frac{7}{3}$$

9. Solve the equation

$$10x^2 + 27x + 35 \;=\; 7x^2 + 7x + 3$$

$$3x^2 + 20x + 32 = 0$$
$$(3x + 8)(x + 4) = 0$$
$$x = -4$$
$$x = \frac{-8}{3}$$

10. Solve the equation

$$10x^2 + 58x - 43 \;=\; 3x^2 + 8x + 5$$

$$7x^2 + 50x - 48 = 0$$
$$(7x - 6)(x + 8) = 0$$
$$x = -8$$
$$x = \frac{6}{7}$$